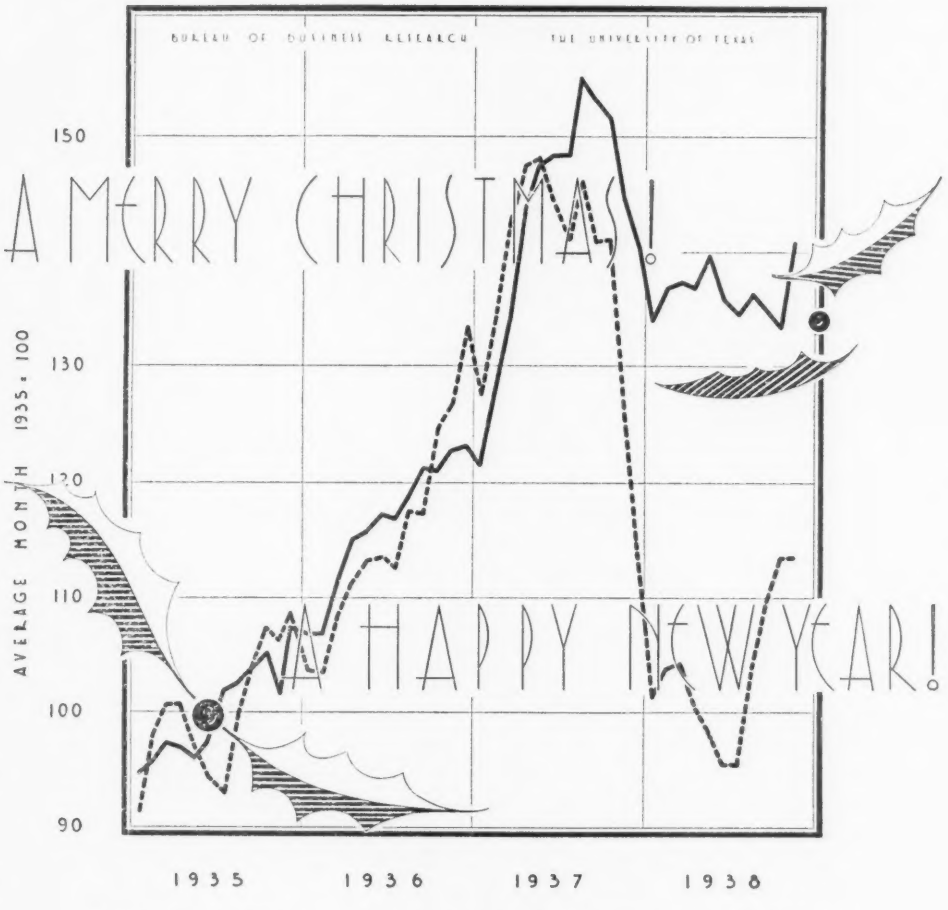
TEXAS BUSINESS REVIEW

Bureau of Business Research
The University of Texas

Vol. XII, No. 11 December 24, 1938

A Monthly Summary of Business and Economic Conditions in Texas and the Southwest
Bureau of Business Research, The University of Texas, Austin, Texas

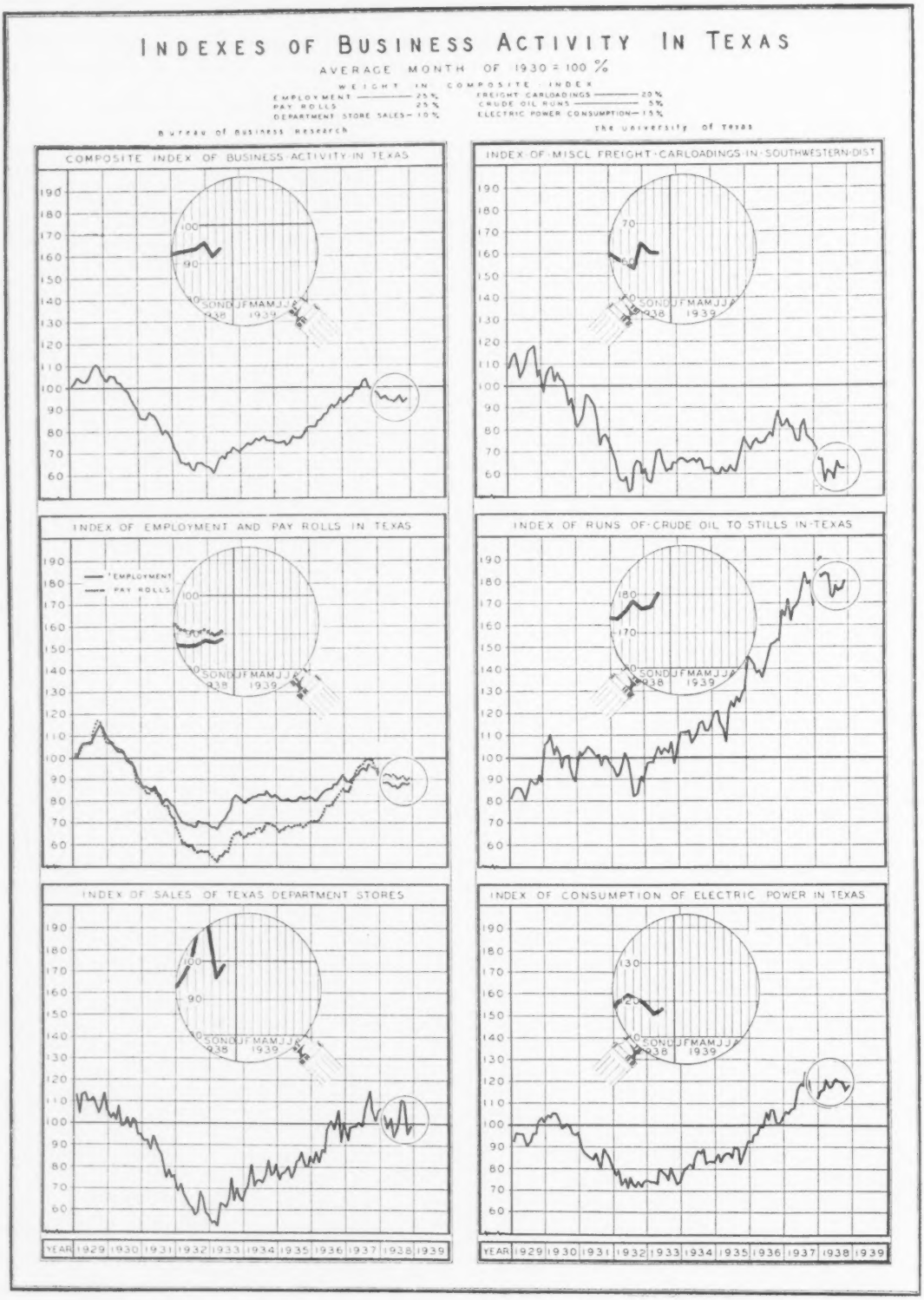
Entered as second class matter on May 7, 1928, at the post office at Austin, Texas, under Act of August 24, 1912



COMPARATIVE INDEXES OF PAY-ROLLS IN TEXAS & UNITED STATES

— TEXAS
--- UNITED STATES – BUREAU OF LABOR STATISTICS MANUF. INDEX CONVERTED TO AV. MO. 1935=100%

TEN CENTS PER COPY ONE DOLLAR PER YEAR


INDEXES OF BUSINESS ACTIVITY IN TEXAS
AVERAGE MONTH OF 1930 = 100 %
WEIGHT IN COMPOSITE INDEX
EMPLOYMENT ——— 25%
PAY ROLLS ——— 25%
DEPARTMENT STORE SALES— 10%
FREIGHT CARLOADINGS ——— 20%
CRUDE OIL RUNS ——— 5%
ELECTRIC POWER CONSUMPTION— 15%
Bureau of Business Research
The University of Texas
COMPOSITE INDEX OF BUSINESS ACTIVITY IN TEXAS
INDEX OF MISCL FREIGHT CARLOADINGS IN SOUTHWESTERN DIST.
INDEX OF EMPLOYMENT AND PAY ROLLS IN TEXAS
EMPLOYMENT
PAY ROLLS
INDEX OF RUNS OF CRUDE OIL TO STILLS IN TEXAS
INDEX OF SALES OF TEXAS DEPARTMENT STORES
INDEX OF CONSUMPTION OF ELECTRIC POWER IN TEXAS
SONDJFMAMJJA
1938
1939
YEAR 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939

Business Review and Prospect

Prospects for industry and trade during the first six months of 1939 are the exact opposite of those which prevailed a year ago with reference to prospects for the corresponding period of 1938. Then business was plummeting at a rate not hitherto exceeded in our economic history; at present the business curve is pointing upward as sharply as it was pointing downward during the final months of 1937. The momentum already attained indicates that further progress will be made in the new year, subject to possible minor setbacks if optimism should get out of bounds. There is, however, as yet no solid ground for confidence that this time we are definitely launched on a long upward phase in the business cycle. Unquestionably all of the elements are present for a long period of prosperity. Money instruments are abundant and promise to remain so indefinitely. Deferred demand, resulting from nine years of depression from which we did not fully emerge even in the winter of 1937, would give a strong impetus to sustained business improvement merely in making up for the under consumption which has prevailed during this period. Many more significant factors, all favoring a long era of prosperity, could be named. Yet no one feels certain that the thing hoped for will be attained, although the producing power of the Nation has never been greater for meeting the essential material needs of the people of this country.

Before the people of this Nation can be assured that the country is at the threshold of a long period of industrial expansion, policies must be formulated which will give the people the ability to purchase all of the goods and services industry and commerce are able to supply. Concretely this resolves itself into the formulation of sound policies with respect to the fundamental economic and social institutions through the medium of which modern production is carried on. Above all it requires a clear understanding on the parts of those in control of capital and labor, of the true functions of these factors and a sense of responsibility to the public to make these factors effective for the general welfare. With such basic policies and such conceptions of responsibility gradually becoming effective, and the public made conscious that this is taking place, the chaotic conditions which have so long surrounded such national problems as agriculture, the railroads, the public utilities, and other similar institutions will give way to their orderly development, with all of the attendant cumulative effects of greater productivity, increased pay rolls, general development of confidence, and a rising standard of living. The months immediately ahead may give us some clue as to what we may expect with regard to policies or absence of them which are certain to have a profound bearing on the future welfare of all citizens of this country,

Texas Farm Cash Income

Cash income from agriculture in Texas dropped sharply in comparison with November last year. The decline was entirely the result of reduced income from cotton and cottonseed. Receipts from cattle, calves, and sheep were well above the income from these sources last year. Total farm cash income for the State during the month, as computed by this Bureau, was $39,758,000 compared with $57,514,000 during November last year, a decline of 31 per cent. Aggregate farm cash income from January to November, inclusive, was $380,740,000 compared with $508,590,000 during the corresponding period last year, a decline of 25 per cent. Government farm subsidies are not included in these computations.

The following table gives for the State and the various crop reporting districts the indexes of farm cash income during November and the two comparable months, and also the total income for the year to date. The indexes are based on the five-year period from 1928–1932. Wide variations are to be noted in the relative showing of the various crop reporting districts.

INDEX OF AGRICULTURAL CASH INCOME IN TEXAS

Districts	Nov. 1938	Oct. 1938	Nov. 1937	Cumulative Income Jan.–Nov. 1938	Cumulative Income Jan.–Nov. 1937
				(000 Omitted)	
1–N	96.0	76.0	118.7	$ 35,064	$ 47,932
1–S	105.8	129.9	254.7	32,137	48,286
2	46.1	69.0	92.6	45,050	55,535
3	71.2	48.4	91.8	20,369	25,890
4	48.2	32.3	71.6	74,313	100,717
5	22.4	28.9	42.1	30,855	43,285
6	114.2	103.6	88.9	19,271	17,259
7	86.7	53.4	84.8	29,924	44,715
8	79.4	57.9	71.0	38,030	52,065
9	108.4	83.5	112.3	20,813	27,123
10	113.6	72.4	119.5	11,611	15,043
10–A	277.4	150.2	224.7	23,306	30,740
STATE	73.3	58.0	110.8	$380,743	$508,590

Texas Business

The outlook for Texas industry and trade is becoming increasingly brighter. Compared with the Nation as a whole the business decline during the past year in this State has been mild, and indications are that Texas will soon follow the upward trend of national business, thus escaping most of the rigors of the depression experienced during the past year in the North and East. Relative declines in employment and pay rolls in Texas and the rest of the country illustrate how much more severe the depression was in the North and East than it was in Texas. During 1938 manufacturing employment in Texas has been approximately eight per cent under last year, as compared with a drop in manufacturing employment in the country as a whole of approximately

For Other Texas Data, See Statistical Tables at the End of This Publication

20 per cent. Texas factories show decreased pay rolls under last year of approximately five per cent; while factory pay rolls in the Nation have decreased approximately 27 per cent.

All but one of the factors, miscellaneous freight carloadings, included in the composite business index for Texas advanced from October to November, and the one exception remained virtually constant. The margin between the current composite index and the corresponding one last year has narrowed to about five points. The comparable indexes are given in the following table.

INDEXES OF BUSINESS ACTIVITY IN TEXAS

	Nov. 1938	Nov. 1937	Oct. 1938
Employment	88.67	94.93	87.84*
Pay Rolls	91.07	96.24	89.87*
Miscellaneous Freight Carloadings (S.W. District)	62.17	76.05	62.62
Crude Runs to Stills	180.42	180.48	177.07
Department Store Sales	99.05	101.30	95.83
Electric Power Consumption	118.07	113.46	116.49*
COMPOSITE INDEX	94.01	99.08	92.86*

*Revised.

F. A. Buechel.

Financial

Commercial banking trends have shown little change during the past month. Aggregate demand deposits have continued to expand, and earning assets have increased but slightly. The gain in earning assets has been almost entirely in the category of brokers loans. Adjusted demand deposits of all member banks, which represent total demand deposits less inter-bank deposits, United States Government deposits and items in process of collection and hence might be termed "customer deposits," have reached a level approximating the highest ever reported. Accompanying this expansion there has been a decline in the rate of deposit turnover to extremely low levels.

Adjusted demand deposits of the reporting member banks increased from $15,711,000,000 on November 9 to $16,114,000,000 on December 7, which latter figure compares with $14,707,000,000 reported for December 8, 1937. This expansion of $1,400,000,000 in customer demand deposits during the year is the result largely of gold imports and Treasury disbursements. Incidentally gold imports continued in substantial volume during November, aggregating some $110,000,000, a considerable drop, however from the $562,000,000 reported for October. The total monetary gold stock of the country reached the record level of $14,367,000,000 on December 7.

Aggregate business loans of the reporting member banks revealed almost no change during the month under survey, standing at $3,831,000,000 on December 7. Loans to brokers, however, expanded from $717,000,000 to $838,000,000, but still were some $108,000,000 below the level which obtained one year earlier. Total loans of the reporting member banks in all categories expanded from $8,327,000,000 on November 9 to $8,460,000,000 on December 7, the latter figure being approximately $1,050,000,000 under the level one year before.

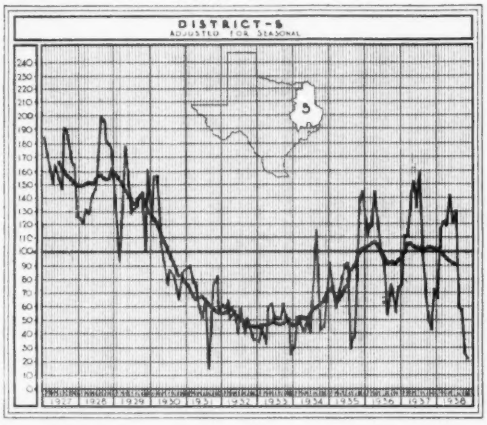
Investment holdings of the reporting banks declined slightly during the month. Holdings of government obligations were reported at $9,772,000,000 on December 7 and of "other securities" at $3,218,000,000. These figures were higher respectively by $657,000,000 and $353,000,000 than those reported for December 8, 1937. This expansion, of course, reflects a further effort on the part of commercial banks to offset diminishing income from loans with bond interest.

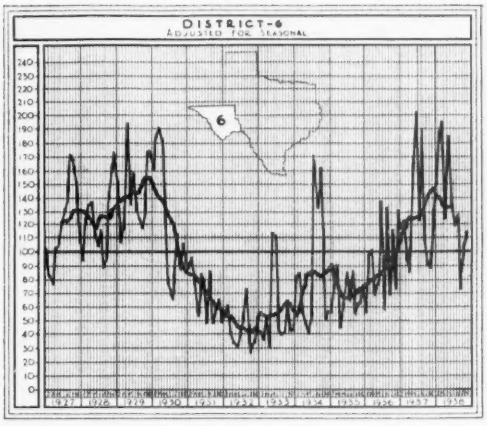
Reflecting gold imports and Treasury disbursements excess reserve balances of all member banks were estimated at $3,440,000,000 on December 7, a gain of $310,000,000 during the month. This level represents a record high for excess reserves—approximately $140,000,000 above the previous high reached in December, 1935. If present legal reserve requirements were not some 75 per cent above those in effect in 1935, excess reserve balances would now be nearer $5,500,000,000 than $3,500,000,000. The rapid increase in excess reserves during recent weeks had not been generally anticipated as the normal seasonal increase of currency in circulation had been expected to slow down such expansion until after the turn of the year. Incidentally the volume of currency in circulation (adjusted for seasonal variation) has continued to expand during the past month and now stands at the highest level in history except for the brief period of the Nation-wide banking holiday. Some part of this expansion can be accounted for by increased currency shipments to Europe, but most of it represents increased currency requirements due to expanded relief rolls and industrial pay rolls or possibly hoarding.

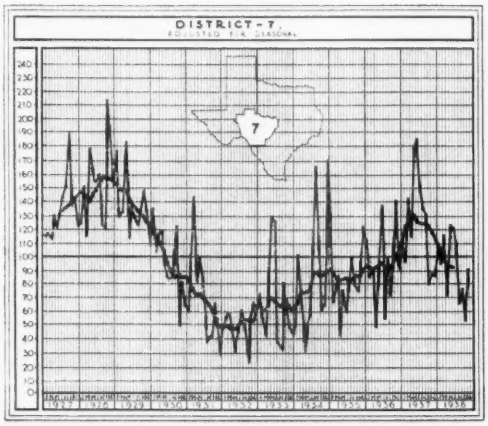
The present immense excess reserve balances of the member banks forecast indefinitely continued easy money market conditions and low yields on high grade bonds. In view of the certainty of continued federal deficits and the evident intention of the Administration to maintain an easy money market in which to float new government loans, it is somewhat surprising to find so many banks eschewing long term government bonds in favor of short maturities. With virtually a government guaranteed bond market, it would seem that the longer term bonds would involve but little more risk than the shorter issues while yielding materially higher income returns.

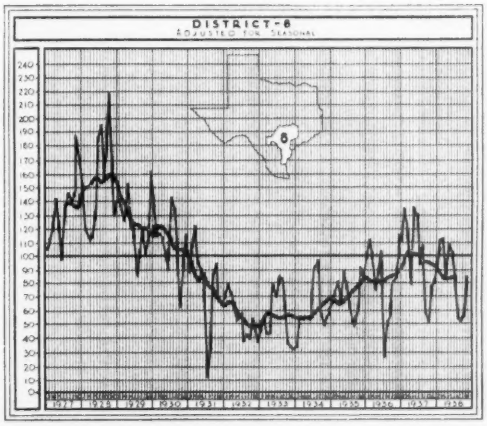
Partly because of political pressure and partly because of a real need to increase earning assets, commercial banks have been giving serious thought to a possible more liberal program of intermediate credit lending to industry. It now seems probable that the coming Congress will give at least passing consideration to the alleged plight of small business concerns in need of such credit accommodation. Already two plans have been proposed. One plan would set up a corporation to insure all such loans made by commercial banks, the corporation being financed by a tax on bank deposits. The other would establish a system of industrial intermediate credit banks to engage directly in this type of lending.

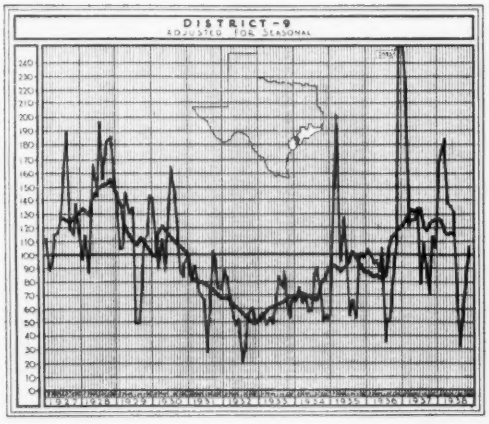
INDEX · OF · AGRICULTURAL · CASH · INCOME · IN · TEXAS · BY · DISTRICTS

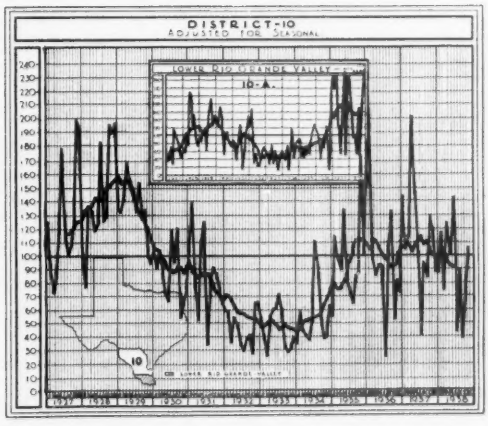












LEGEND

MONTHLY INDEX ——

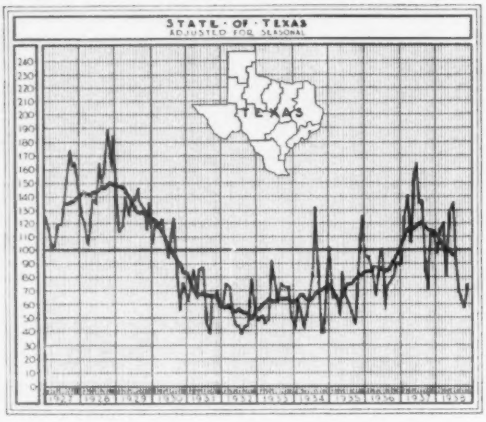
TWELVE MONTHS MOVING AVERAGE ——

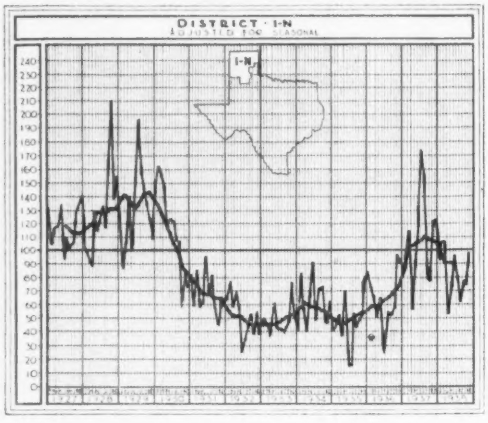
AVERAGE MONTH OF 1928 - 1932 = 100%

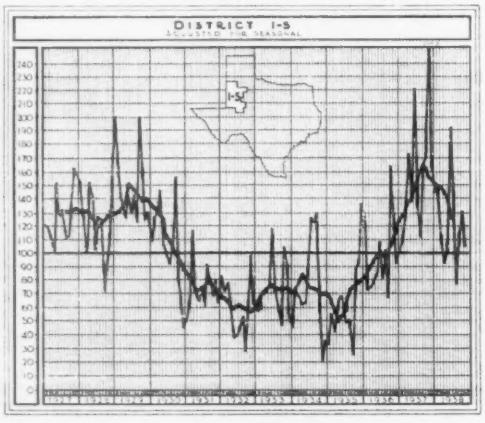
BUREAU OF BUSINESS RESEARCH

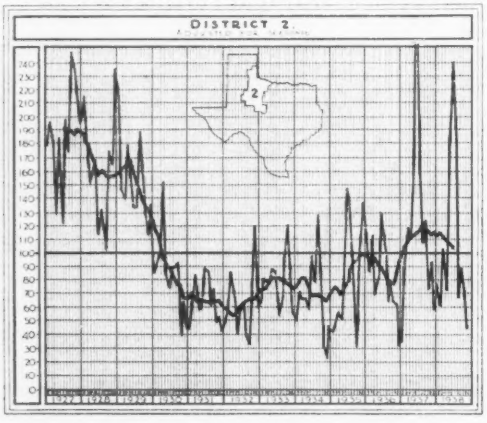
THE UNIVERSITY OF TEXAS

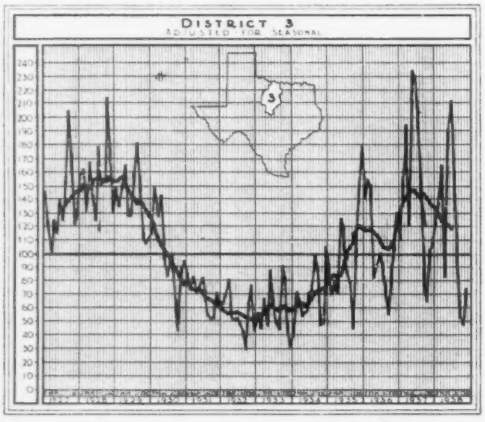
INDEX · OF · AGRICULTURAL · CASH · INCOME · IN · TEXAS · BY · DISTRICTS

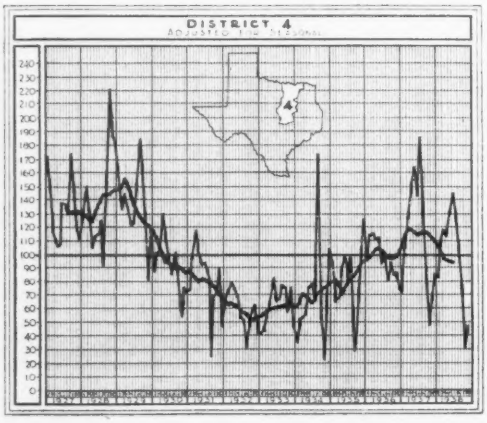












LEGEND
MONTHLY · INDEX —
TWELVE MONTHS MOVING AVERAGE ——

AVERAGE MONTH OF 1928 - 1932 = 100%

BUREAU OF BUSINESS RESEARCH

THE UNIVERSITY OF TEXAS

In appraising the need for new industrial intermediate credit facilities, it is well to remember that two federal agencies are already operating in this field, the Federal Reserve Banks since 1934 and more recently the R.F.C. Both agencies are authorized to extend direct advances to borrowers and to insure such loans made by commercial banks. The experience of these government agencies with intermediate credit loans should indicate somewhat the real demand for loans of this type.

From June, 1934, to November 30, 1938, the Federal Reserve Banks received 9,320 applications for industrial advances aggregating a total of $397,759,000. Of these, 2,644 applications involving a total of $174,091,000 were approved by the Reserve Banks, a rejection percentage of 44 as to amount. Of the loans approved, but $17,391,000 were outstanding on November 30, 1938. As of June 30, 1938, the R.F.C. had authorized industrial loans aggregating $170,143,000, having rejected 28 per cent of the total funds applied for. Of the total authorized, $122,420,000 had actually been advanced, of which $70,751,000 was outstanding on June 30.

At no time have the total industrial loans of both the Federal Reserve Banks and the R.F.C. exceeded $140,000,000 or four per cent of the outstanding business loans of the reporting member banks alone. Further, the experience of the lending agencies with this type of credit has not been entirely satisfactory as is indicated by the following statement taken from the *Monthly Review* of the Federal Reserve Bank of New York of August 1, 1938—"In general, the experience of this bank with this type of loan indicates that the income received, even at rates as high as six per cent, is not adequate to cover expenses and losses."

JAMES C. DOLLEY.

A Sketch of the Historical Development and Outlook of Manufacturing in Texas

Texas has always been a frontier country; its people have been pioneers. The glamour of the Conquistadores as far back as four centuries ago, the fascinating achievements of the Spanish occupation, the heroics of earlier Anglo-American settlement, the romance of the range, the adventuresome days of the trail-driving period, and after 1875, the rapid expansion of the Cattle Kingdom into the extensive grasslands of western Texas, the insistent problems associated with Texas becoming the outstanding cotton growing country of the world—all of these are part and parcel of the epic of Texas. These features of former frontiers, important and fascinating as they are, should not blind us to the more recent and somewhat more prosaic achievements on the industrial frontier in the State, and particularly so as these later accomplishments promise to be of outstanding significance in the future.

Texas has long been noted for its leadership in supplying a wide variety of products and raw materials: range cattle, sheep and goats, wool and mohair; cotton and cottonseed; oil and natural gas, gasoline, carbon black and helium; and sulphur. These commodities belong to three distinctive groups: products of the soil; mineral fuels; and non-metallic resources. And fortunate, indeed, is Texas in its possession of the rich and extensive supplies and reserves of these three great groups of natural resources, for these are and will be the sustaining factors of Texas economy far into the future. No industrial platform for Texas can be unmindful of the potential richness of these vast resources or of the problems to be solved in the economic utilization of these resources.

Earliest of manufactures in Texas were those of the various Indian groups in the State—as, for instance, the decorated pottery which is so characteristic of northeast Texas, carvings in shell characteristic of the Gulf Coast, the crude stone grinding mortars, rather widely distributed, the various items made from native plants, or the varied materials made from the skins of the buffalo of the Plains, besides a great variety of articles and artifacts made from flint and stone.

Manufacturing in Texas during the period of Hispano-American occupation and the early Anglo-American period belonged in the class of handicrafts; the articles made were charcateristic of scattered and oftentimes marooned and isolated pioneer settlements which were necessarily impelled to be almost wholly self-sufficing. One of the earliest applications of mechanical energy in Texas manufacturing was that of water power used in pioneer saw-mills and grist-mills which were characteristic establishments in most communities. These early saw-mills in timbered East Texas blazed the trails for the later large-scale lumbering industry just as many of the early grist-mills paved the way for the modern flour mill establishments of today.

One of the earliest commercial ventures in mill operation was that of the Mormons who operated the Sycamore Springs Mill a short distance west of Austin and later, another near Fredericksburg; they also had a mill at Bandera.

Prior to the middle of the 19th century the common articles of furniture were largely homemade; and the spinning wheel and the hand-loom, also hand-made, were to be found in practically every household.

One of the first manufacturing plants established in Texas, other than grist-mills and saw-mills, were the Llewellyn iron furnaces and plow factory which were put in operation several years before the Civil War; these plants were located at Kellyville, five miles from Jefferson. Here were made the famed Kelly plows used on plantations tributary to Jefferson; later on the plant was moved to Longview.

During the Civil War the Confederate Government established a slaughter house or packing plant at Jefferson; cattle and sheep were slaughtered there in large numbers, the products carried down Red River to New Orleans, and thence reshipped through the South. But even this early development had been preceded by small

beef canneries at Galveston and Jefferson, the products of which were shipped to the West Indies.

Hide and Tallow Factories Along the Gulf Coast

Earliest of the larger commercial ventures in processing Texas raw materials were the hide and tallow factories which grew up along the Gulf Coast from Galveston to Point Isabel in the decade following the close of the Civil War.

Apparently the most extensive group of packeries was located on Aransas Bay at Rockport and Fulton; others were scattered up and down the coast. At one time there were three in operation at Corpus Christi; there were others at the mouth of the Rio Grande, serving markets in Mexico. Another was located at Galveston, while on Matagorda Bay, "Shanghai" Pierce operated his own packery as did King and Kennedy on their vast holdings south of the Nueces. King and Kennedy during this period are said to have procured their own salt by evaporation from salt lakes on their ranch lands.

In this period prior to commercial refrigeration hides and tallow were the chief and oftentimes the only commercial products of livestock; in some cases the hindquarters were salted down, and in other cases pickled beef was packed in barrels. Certainly thousands and thousands of cattle were slaughtered for hides and tallow alone; at one time a flourishing "bone" mill on Aransas Bay was making a high grade fertilizer from the refuse, which was marketed along the Atlantic Seaboard.

In the later 1870's the hide and tallow period was brought to a close; during the middle of this decade the buffalo were being cleared from the Great Plains, after which it was impossible for the roving Indian tribesmen to subsist in what had been unconquered Indian country of Western Texas since the building of the first Spanish missions and settlements. For a decade and more after 1875 millions of Texas cattle in great trail herds were driven northward to rail-heads in Kansas or to the northern ranges.

Meat Packing in Texas

Although greatly hampered by barbed-wire fencing and by quarantine regulations, the era of trail driving out of Texas was brought to a close by the coming of railroads into the State. With the growth of commercial centers and the extension of railways westward, local packing concerns were established in the larger places. These concerns were small, but as the needs grew for larger enterprises the scarcity of capital proved a hampering factor. According to Frank Hastings in his "A Ranchman's Recollections" there was a packing-house at Denison in 1874 or '75. Also according to Hastings "the first application [of ice] to the packing industry seems to have been at Denison, Texas." In 1884 a small packing plant was built in Fort Worth; in 1890 the Fort Worth Union Stockyards were opened. During the 1890's the packing business at Fort Worth was being expanded beyond plant capacity and beyond the supply of available capital to provide the needed plant capacity. Additions were made, but by the turn of the century plans were being laid for the development of branch packing plants in Fort Worth. In the early years of the present century both Swift and Armour built plants in Fort Worth, and by 1903 both of those plants were in operation. Other packing concerns grew up in the larger Texas cities, some of which have since been acquired by the big packers. In recent years there has developed a movement looking towards the development of a meat packing industry on the Gulf Coast to take advantage particularly of the low-cost water transportation to markets on the Eastern Seaboard. Swift and Company's new packing plant at Lake Charles, Louisiana, began operations a few weeks ago, and Armour and Company has obtained a site for a packing plant at Houston.

Processing of Other Agricultural Raw Materials

One of the earlier handicraft industries—the making of cowboy boots—has persisted, in somewhat modified form, of course, down to the present. Modern tanning plants have been developed, such as those at Yoakum and Fredericksburg. The plant at Yoakum has been expanded to make a fairly wide line of fine leather goods. Nocona, early home of Justin boots, is also an important center for the manufacture of fine leather goods; and at Fort Worth the modern boot and shoe manufacturing plant of H. J. Justin and Sons continues to manufacture the well-famed Justin products. It is a striking fact and a most important item to note that a good share of these high-class, Texas-made leather products are sold outside the State.

Early in the century most commercial centers of the cotton growing regions had one or more cotton oil mills; especially was this true of that premier cotton growing country, represented by the rich and extensive Black Prairies. In more recent years, with the rapid growth of cotton-seed oil products for cooking compounds a number of modern vegetable oil refining plants, of substantial size and output, have been developed, such as those of Dallas, Houston, Sherman, San Antonio, Greenville, and other points. Paralleling the growth of vegetable oil refining plants in Texas has been the expansion of dairy products plants, including a number of branch plants of several national dairy concerns such as Borden's, Carnation, and Kraft-Phenix. Many of these milk products plants have been established in the rich black lands of the Texas prairies, such as those at Waco, Schulenburg, Victoria, Denison, and in good pasturage areas elsewhere. And more recently still has come the industry of canning fruit and vegetable products in Texas; this is an industry in which a substantial start has been made, and furthermore, it is one of considerable promise. The growth of canning in conjunction with the outstanding potentialities of this industry in Texas has been enough to bring into Texas a branch plant at Houston of the American Can Company, which is producing cans primarily for the canning of fruits and vegetables; the older branch plant of the Continental Can Company also at Houston makes cans for petroleum products as well as for fruits and vegetables.

Another widely distributed group of manufacturing plants processing Texas raw materials from its farms are the cotton textile mills, such as those at New Braunfels, Dallas, Mexia, Brenham, Houston, Denison, Hillsboro, Itasca, Post, etc. Texas, first in the production of

raw cotton, has nationally a low ranking in the volume and variety of output of its cotton mills; and though Texas leads in the production both of wool and mohair, it has neither a wool nor a mohair scouring plant.

The manufacture of flour to supply the home market has been a Texas industry for three-quarters of a century and more. The early Mormon mills have been mentioned. What is now the Pioneer Flour Mills of San Antonio was established in 1851 by C. H. Guenther. In recent years with the growth of dairying and the poultry industry the manufacture of feedstuffs has become an important milling enterprise. Milling plants in the major cities of the State have been materially influenced by the migration during recent years of hard winter wheat production into the superior quality wheat growing areas of the Panhandle. The manufacture of flour in Galveston for the Eastern Seaboard market is a phase of the industry which merits further attention.

The preparation of Mexican foods for home and outside markets has given rise particularly in San Antonio and Austin to well-known enterprises. Among other industries processing Texas agricultural materials are peanut products plants, poultry dressing plants, egg products plants, broom factories, rice mills, and the like.

The Forest Industries

Quite naturally lumbering early became an important industry in the timbered lands of Eastern Texas. Prior to the railroad era lumber was hauled long distances by wagon into the prairie lands of Central Texas; and with the coming of railroads a wide market for lumber was rapidly established as the productive but timberless prairies and plains were settled. The forests of the Lake States had been pretty well cut over by 1890, and the lumber industry in the form of large-scale enterprises migrated Southward and to the Northwest. This southern migration accentuated the already established Southern lumber industry particularly in Texas, Arkansas, and Louisiana. In Texas heaviest production of lumber had been achieved prior to 1910; since then the output of lumber production in the State has steadily declined. However, paralleling the earlier southward migration of the lumber industry, there has now occurred a substantial migration of the pulp and paper industry into the Gulf states. Wood products other than lumber have been developed in several places in the State to a position of more than local importance—such as the manufacture of furniture, the making of cross-ties, telegraph and telephone poles, piling materials, etc. In connection with the production of ties, poles, and piling a substantial development of the creosoting industry has grown up along the Gulf Coast particularly at Houston and Beaumont. Still another wood products industry in Texas has to do with the utilization of the extensive cedar woodlands which characterize the broken, limestone hill country of the eastern portions of the Edwards Plateau from Uvalde to Austin; the cedar brakes also extend northward from the Colorado, characterizing limestone areas in the Lampasas Cut Plains country and beyond, as in the Palo Pinto country. For years these cedar brakes have supplied vast numbers of fence posts for the ranch lands of Western Texas; in places the production of charcoal in the past has been of local importance. Cedar oil also used for a variety of purposes can be produced from these trees. Texas has one of the largest, perhaps the largest, continuous areas of cedar woodland in the United States.

Since 1900

The history of the pulp and paper industry in Texas occupies a peculiar niche in the development of Kraft paper in the South. About 1903 an unsuccessful attempt to make paper from Southern pine was begun at Pensacola, Florida; later, the equipment of this plant which used the soda pulp process was moved to Orange, Texas. Here in 1911 Edward H. Mayo first successfully made pulp and Kraft paper from Southern pine by use of the sulphate pulp process; from these modest but notable beginnings the realization grew that a sound commercial product could be made from Southern pines. As is usual in such cases, the financing of the new industry was most difficult. When the second mill for using southern pines was established at Moss Point, Mississippi, it had to be financed largely from England. To quote a statement made a few years back by J. H. Allen, of Union Bag & Paper Company: "Ed Mayo's 20 tons of sulphate pulp a day at Orange, Texas, has grown into a sulphate pulp industry in the South which will soon equal 8,000 tons per day."

Recently the Champion Paper & Fiber Company has established a pulp plant at Pasadena on the Houston Ship Channel, which is making bleached sulphate pulp from Southern pine and bleached soda pulp from hardwoods. "Originally suited only to the production of pulp for the coarser papers, this process has been adapted by the Champion organization, over a long period of experimentation and research, to the production of a pulp entirely suitable for the finer, high grade white papers." Pulp made at Pasadena is shipped to Champion's plant at Hamilton, Ohio, where it is made into the finest coated papers. Among men in the paper industry, the pioneering of the Champion organization in pulp and paper research is regarded as one of the outstanding developments in the paper industry during the past two or three decades. Further developments in Kraft pulp and paper, the production of book paper, the making of rayon pulp, and above all the manufacture of newsprint from Southern forests altogether constitute momentous undertakings and industrial shifts which cannot but be of immense significance to Texas as well as to the Southeast.

By 1900 Texas had become the premier cotton state and cotton at that time was grown chiefly on the rich Black Prairies and in the northeastern quarter of Texas; by 1900 Texas was also the leading range cattle state, and it was also an important sheep and wool producer. Since 1900 Texas agricultural production, both of old and new crops and products, has grown apace and an important line of new industries involving the processing of agricultural and range products has been developed.

But since 1900 there has come to Texas a very different line of industries which have virtually transformed the economic life of the State; this line of industries is concerned with the exploration for and the production, transportation, and refining of oil, and more recently still the production, transportation, and use of natural gas

has grown into an important industry. Owing to its size, to the large number of its geologic regions possessing suitable structures, and to the wide variety of its geologic strata ranging in age from the oldest oil bearing formations to the youngest, Texas has come to be by far the leading oil and natural gas producing State; and, it is important to note, Texas is the premier state as to rank in reserves of both these significant mineral resources. Texas attained first place in natural gas production in 1929 and in oil production in 1930; since those years, Texas production of these commodities has forged forward. The leading position of Texas in oil production is obviously a major factor in the growth to large proportions of the drilling and oil industry equipment concerns together with the many accessory enterprises in the State.

In 1930 Texas attained first rank in petroleum refining. Oil refining, like oil production, had become of local importance prior to 1900, as at Corsicana; and for a few years after the Lucas gusher came in at Spindletop (1901) the Texas oil refining industry remained local in proportions, but since around 1910, paralleling the rapid rise in demand for oil derivatives, and of motor fuels in particular, it has steadily progressed to the level of a national industry and in the 1930's Texas petroleum refining attained first place in the country. The movement towards concentration of modern refining capacity on the Gulf Coast, with its access to Atlantic Seaboard markets by low-cost tanker transportation, in conjunction with the large reserves of crude oil in the State, bids fair to raise the rank of Texas still higher in oil refining. And, furthermore, the substantial production of a wide range of chemicals from petroleum products, gases, and residues may be considered as only begun in the State. Also, the large expansion of the oil refining industry and recent readjustments therein has been a factor of no small proportions in the markets for sulphuric acid and Fuller's earth products, both of which utilize Texas raw materials.

Petroleum refining is far and away the State's leading line in manufacturing; natural gas products, however, are important, Texas being by far the leading producer of carbon black and has at Amarillo the one important helium plant in the country.

Natural gas has become an important household fuel; it has attained first rank in Texas as an industrial fuel in power plants for the generation of electricity; and it is being more widely used as an industrial fuel. The zinc smelter at Amarillo, as well as the one near Dumas, were so located because of the availability of natural gas as fuel; natural gas is used as a fuel in the large El Paso Smelting Works of the American Smelting & Refining Company, and the Nichols' copper refinery at El Paso. Natural gas is often referred to as the perfect fuel. It has been said that had the wasted natural gas of Texas been properly conserved, it would be sufficient to support in Texas a good portion of the power-using industries of the Middle West. Nor can too much emphasis be placed on the fact that natural gas is particularly desirable as a fuel for certain industries, such as glass-making and for the manufacture of pottery and ceramics.

The American Smelting and Refining Company operates a large plant at El Paso which smelts gold, silver, lead, and copper ores, and the plant of the Nichols Copper Company at El Paso refines blister copper obtained from Arizona. Laredo boasts of the only antimony smelter in the Western Hemisphere; this plant, built in 1930, began operations in 1931. It uses ore brought in from Mexico, and even from Bolivia and Peru. Another industry based upon the refining of imported raw materials is the manufacture of sugar. The plant of the Imperial Sugar Company at Sugar Land has been in operation for years. The plant of the Texas Sugar Refining Corporation at Texas City is not operating at present. Sugar refined in Texas is practically all consumed within the State.

The generation of electric power is a manufacturing industry of vast proportions, and obviously this industry is of great significance in Texas and elsewhere; space does not permit more than the brief mention of the growth and location of large power stations and of the extension of State-wide and inter-connection of power systems, which has been mainly brought about since 1912.

The increasing large use of electrical power, in conjunction with its effectiveness, mobility, precise control, and individual electric operation of factory units, fortell the almost complete reorientation by electricity of the industrial map of the near future. The use of electrical power is, and will be more so in the near future, a major factor in the current inclusive movement of geographic dispersion of industry; not only will this trend in itself be of great significance to further development of Texas industry, but it will be of particular importance in the further expansion of industries providing finished goods for the expanding home markets of Texas and Southwest. There is, of course, a wide variety of Texas industries serving local markets; of finished goods industries serving the Texas market the future of the garment making industry may be considered as a representative example. It may be noted, too, that the extent of the market in Texas and the Gulf Southwest is already such that it occupies an important sector in the national market; furthermore, emphasizing the fundamental significance of the market in all considerations of an economic nature, the fact that our American market embracing 130,000,000 consumers, the relatively high standard of living of the United States, and a market not impeded by tariff barriers is the outstanding economic feature of our American economy should not be forgotten. As a corollary of these facts, the further growth of the Texas and Southwestern market—a growth sustained by the rich and varied natural resources of these states—will be of momentous importance not only to wholesaling and retailing and industrial marketing, but it will serve as the incentive of and the support for a further large expansion of manufacturing in this sector of the Nation's map. It is this growth which more than anything else will serve to bring about needed corrections in freight rate structures just as it has been the rich natural resources and commercial advantages that have already brought about a substantial beginning in the migration of large industries into this sector.

Future of Non-metallic Resources of Texas

In the processing of Texas raw materials, three stages are obvious, the earlier ones continuing in modified form, and thus overlapping the later stages: (1) Prior

to 1900 practically all processing industries in Texas were concerned with agricultural, range, and forest raw materials; (2) Since 1900 these industries have not only expanded but also have been considerably widened to include numerous new industries. Furthermore, since the turn of the century Texas has witnessed its outstanding growth in the petroleum refining industry, and in the making of products from natural gas. There has been also the greatly increased use of natural gas for fuel purposes, both domestic and industrial; (3) In more recent years Texas has witnessed extensive beginnings in the use of its non-metallic resources (other than as mineral fuels), of which the State has large reserves of limestone, clays, gypsum, sulphur, salt, and others. Representative of one group of enterprises using non-metallics are the cement and gypsum industries, which undoubtedly can be made of great importance in the future. Representative of another group are the chemical industries, producing, besides sulphuric acid, a number of less important products, and more recently the initiation of the heavy alkali industry with the establishment of the large plant of Southern Alkali Corporation at Corpus Christi. Within the past year Southern Alkali has begun the large scale production of chlorine. In this connection mention should be made also of the Matthieson Alkali Works plant at Lake Charles and the plants of the Solvay Process Company and the du Pont organization at Baton Rouge, Louisiana. There are a number of other enterprises making use of non-metallics —the lime industry, building stone, rock-asphalt from the Uvalde district, Darco (activated carbon used in refining processes or in removing colloidal impurities from liquid substances) made from Texas lignite at the Darco plant at Marshall. There are also the well-known health resorts in the State located where mineral waters are available; and in recent years the preparation of crystals by evaporation of these mineral waters has become an outstanding enterprise. Fuller's earth plants are operating at Riverside (Walker County) and in Fayette County. The potash industry is still another enterprise using non-metallics which may become important in Texas: this industry has already attained a substantial development in the Carlsbad, New Mexico, district.

The wide range of non-metallic resources in the State, in conjunction with the ever-widening uses and growing demand for products made from these resources, and supported by the extensive fuel resources of the State promise in the future utilization of these materials a chief means of Texas industrial expansion in years to come.

Summing Up

Industrial development in Texas began as elsewhere as local enterprises adapted to self-sufficing communities. Then came the large production of raw materials which were shipped elsewhere to be processed and marketed, some of which in turn were sold back into the Texas market. Then came the processing of some of our raw materials by commercial enterprises which was followed by the large scale development of Texas petroleum production and its subsequent manufacture; and more recently the manufacture of non-metallics has come in for a substantial beginning. The manufactured products of both petroleum and the non-metallics are sold chiefly outside the State—which means that these industries are here primarily because of the rich natural resources; also, the advantages of water transportation due to or in connection with the Gulf of Mexico have been and are highly important items.

These industries are primarily population-supporting industries and by virtue of that factor a large and growing market for consumers' goods has arisen.

The market in Texas for capital goods industries is and will continue to be a function of the utilization of our natural resources and of the processing and manufacture of raw materials obtained in this utilization. The market in Texas for consumers' goods—built upon population-supporting industries—is already attracting considerable attention by enterprises supplying the retail markets in Texas. The outlook for the continued growth of the so-called population-following industries in Texas—whether the roasting and packaging of coffee, the manufacture of paper and of products therefrom, the making of soap, the tanning of leather, the manufacture of glass and glassware, of pottery and ceramic products, of fine chemicals and the like—is such that trends in this direction will be followed with increasing attention.

Industrialization in its more complete aspects requires the development of integrated, inter-connected enterprises wherein the finished commodities, by-products, and waste materials of one industry or group of industries become the raw materials of other industries in an organized sequence until the final product comes into being. And, in conclusion, it may be emphasized that the attainment of integrated industrial economy in Texas constitutes the challenge to, embraces the potentialities of, and at the same time includes the larger obstacles in the way of the industrialization of the State as based upon the wealth of its varied natural resources and its advantageous geographic situation.

Elmer H. Johnson.

Cotton

Texas is confronted with major problems of readjustment in its economy, due primarily to loss of foreign markets for its cotton. Data presented in detail in the October and November issues of the Texas Business Review show that the United States has lost foreign markets for between three and four million bales of cotton annually. Foreign markets are essentially Texas and Oklahoma markets. This loss of volume of sales plus the decline in the price of cotton per pound have cut deeply into farm cash income in Texas. Prior to the depression cotton and cottonseed furnished about 80 per cent of the cash income from the sale of crops in Texas and about 57 per cent of the total farm cash income. Compared with the years preceding 1929 farm cash income from the sale of cotton and cottonseed in Texas has declined almost $300,000,000, which means

that it is only about two-fifths what it was in 1927 and 1928. That is a tremendous sum of money and indicates something of the size and fundamental nature of the economic adjustment problems confronting Texas.

The following data are presented to throw some light on the problems involved.

The first questions to be answered are: how much has cotton gone down, and how has that affected the cotton growers' buying power and debt-paying ability? Table I shows the changing amounts of other typical commodities which can be bought with a 500-pound bale of cotton by years from 1927.

In order to see the fluctuating value of cotton in terms of the payment of debts, interest, and taxes let us assume that in 1927 a farmer contracted these obligations to the extent of requiring the payment of $500.00 each year through 1938. Table II shows the number of pounds of lint cotton necessary to pay a fixed sum of $500.00 each year in taxes, interest, and debts, and also the value of a bale of middling 7/8 inch cotton in Liverpool and in Houston in grains of gold.

TABLE I

BUYING POWER OF A 500-POUND BALE OF LINT COTTON IN TERMS OF A NUMBER OF TYPICAL COMMODITIES BOUGHT BY FARMERS[1]

Year	Steel Pipe (in tons)	Granulated Sugar (pounds)	Print Cloth (yards)	Flour (barrels)	Gasoline (gallons)	Number of Weeks of Work Based on Average Texas Wage Rate
1927	1.14	1,738	1,445	10.7	407	....
1928	1.31	1,619	1,583	12.7	468	....
1929	1.24	1,699	1,689	12.9	451	4.0
1930	.90	1,282	1,425	10.8	309	2.9
1931	.57	817	1,131	8.1	227	1.8
1932	.45	699	1,080	6.8	170	1.7
1933	.61	896	1,051	7.0	220	2.6
1934	.85	1,313	1,247	8.5	313	3.2
1935	.79	1,138	1,173	7.5	308	3.2
1936	.91	1,151	1,314	8.3	296	3.0
1937	.77	1,105	1,110	7.9	273	2.1

[1]Calculations are based on the average farm price of cotton in Texas and prices of other commodities as quoted by *Standard Statistics* and the average weekly wage of factory employees as compiled by the Bureau of Business Research, The University of Texas.

TABLE II

AMOUNT OF LINT COTTON REQUIRED TO PAY $500 IN EACH YEAR FROM 1927 THROUGH 1937 AND THE AVERAGE PRICE OF COTTON IN GRAINNS OF GOLD IN LIVERPOOL AND IN HOUSTON

Year	Number of Pounds of Lint Cotton Required to Pay a $500 Debt	Value of Middling 7/8 Inch American Cotton (In Grains of Gold per Bale) Houston	Liverpool
1927	3,145	2,002	.....
1928	2,732	2,256	2,574
1929	2,857	2,163	2,421
1930	4,098	1,504	1,764
1931	6,757	969	1,121
1932	8,772	729	884
1933	6,329	793	886
1934	4,202	841	969
1935	4,386	808	945
1936	4,425	822	955
1937	4,673	759	901

COTTON BALANCE SHEET

Indicated supplies of cotton in the United States, December 1, were 19,824,000 bales, compared with 18,623,000 bales last year on this date, 13,065,000 bales two years ago, and a previous all-time high of 18,674,000 bales in December, 1931. The record supply of cotton on hand at present is due to the very large carryover on August 1 from last year and the very slow rate of disappearance this year since August 1. The exports this year to December 1 are the lowest since 1918, in spite of the fact that we have the largest supply on record.

The increase in supplies of cotton in the United States, December 1 from December 1, 1937, were 1,201,000 bales; stocks in European ports and afloat to Europe were 238,000 bales less than last year, or a net increase of these items of 963,000 bales.

The above increase in supply indicates a lower price than last year. This is further emphasized by the fact that world supplies of all cotton according to Garside of the New York Cotton Exchange are 50,605,000, or 537,000 bales greater than last year, and that world consumption of all cotton this year to date is at a rate less than last year.

Calculated prices of American cotton based on total supplies in the United States and in European ports and afloat to Europe indicate a price of New Orleans middling 7/8 inch spots of slightly under 7.00 cents. Prices of American cotton are being held above world competitive levels of such a supply by above-the-market-price loans. The Government now controls over 10,250,000 bales under its various loan programs.

SPINNERS MARGIN

Spinners ratio margin on American cotton based on the price of 32's twist yarn in Manchester and middling 7/8 inch cotton in Liverpool averaged 181 during November, compared with 181 in October and 248 in November, 1937. The pence margin averaged 4.13d for November compared with 4.15d in October and 6.76d in November, 1937. These figures indicate decreasing consumption of American cotton. This is further emphasized by the fact that the price of American cotton in Liverpool is relatively much higher than competitive growths.

A. B. Cox.

COTTON BALANCE SHEET FOR THE UNITED STATES AS OF DECEMBER 1

(In Thousands of Running Bales Except as Noted)

	Carryover Aug. 1	Imports to Dec. 1†	Government Estimate as of Dec. 1*	Total	Consumption to Dec. 1	Exports to Dec. 1	Total	Balance Dec. 1
1928–1929	2,536	112	14,373	17,021	2,246	3,731	5,977	11,044
1929–1930	2,313	104	14,919	17,336	2,286	3,252	5,538	11,798
1930–1931	4,530	14	14,243	18,787	1,605	3,181	4,786	14,001
1931–1932	6,369	21	16,918	23,308	1,776	2,854	4,636	18,678
1932–1933	9,682	27	12,727	22,436	1,902	3,206	5,108	17,328
1933–1934	8,176	46	13,177	21,399	2,068	3,360	5,428	15,971
1934–1935	7,746	39	9,731	17,516	1,717	1,894	3,611	13,905
1935–1936	7,138	30	10,734	17,902	1,924	2,575	4,499	13,403
1936–1937	5,397	41	12,407	17,845	2,482	2,303	4,785	13,060
1937–1938	4,498	31	18,746	23,275	2,212	2,434	4,652	18,623
1938–1939	11,533	54	12,008	23,595	2,236	1,535	3,771	19,824

The cotton year begins August 1.
*In 500-pound bales.
†In running bales, counting round bales as half bales.
NOTE: The figures have been revised in accordance with the revisions made by the United States Bureau of Census.

NOVEMBER RETAIL SALES OF INDEPENDENT STORES IN TEXAS

	Total Number of Firms Reporting	Percentage Change in Dollar Sales Nov. 1938 from Nov. 1937	Nov. 1938 from Oct. 1938
TOTAL TEXAS	1,277	− 1.4	+ 4.5
TEXAS STORES GROUPED BY PRODUCING AREAS:			
DISTRICT 1-N	87	−11.2	+ 2.0
Amarillo	16	− 5.3	+12.1
Canyon	5	− 6.3	− 8.6
Pampa	18	−17.0	+11.1
Plainview	13	− 9.7	− 5.3
All Others	35	−11.2	−19.4
DISTRICT 1-S	20	− 9.0	+28.6
Big Spring	7	+12.9	+36.7
Lubbock	10	−12.7	+27.7
All Others	3	−17.5	+13.9
DISTRICT 2	112	− 7.7	− 1.7
Abilene	16	− 8.1	+ 5.6
Childress	3	+ 2.2	−11.0
Snyder	5	−30.1	−32.1
Vernon	8	+10.0	− 1.3
Wichita Falls	16	− 7.1	− 4.5
All Others	64	− 7.9	+ 0.6
DISTRICT 3	42	+ 1.4	+10.9
Brownwood	6	+22.1	+28.8
Eastland	8	+12.8	+ 2.1
Stephenville	7	− 2.3	+14.6
All Others	21	− 2.3	+ 7.7

	Total Number of Firms Reporting	Percentage Change in Dollar Sales Nov. 1938 from Nov. 1937	Nov. 1938 from Oct. 1938
DISTRICT 4	314	+ 3.5	+ 2.7
Cleburne	9	− 8.8	+ 1.0
Commerce	5	− 1.3	−12.5
Corsicana	10	− 3.3	+ 0.4
Dallas	58	+ 0.8	+ 1.7
Denison	7	− 0.1	−16.8
Ennis	6	− 7.9	− 1.3
Fort Worth	60	+ 7.5	+ 7.9
Gainesville	5	+ 1.0	− 6.1
Sherman	8	−23.0	−13.6
Taylor	6	+99.2	+46.5
Temple	13	− 6.8	−11.5
Waco	34	− 2.4	− 8.8
All Others	93	+17.2	+ 7.9
DISTRICT 5	125	− 0.1	+ 6.4
Bryan	8	+19.9	−10.1
Henderson	6	+22.9	+74.2
Longview	9	−12.4	+24.4
Marshall	14	− 0.8	+12.4
Tyler	19	− 3.1	− 0.9
All Others	69	− 2.7	+ 0.6
DISTRICT 6	42	− 6.9	+ 7.6
El Paso	30	− 6.1	+ 8.0
All Others	12	−15.8	+ 2.9
DISTRICT 7	67	− 3.7	− 4.1
Brady	9	+46.9	+29.4
San Angelo	15	−10.4	−11.0
All Others	43	− 6.0	− 4.0
DISTRICT 8	225	− 2.3	+ 1.7
Austin	24	+13.0	− 0.7
Beeville	5	+23.0	+33.3
Corpus Christi	11	−15.5	+ 2.7
Cuero	8	+22.8	+ 6.2
Lockhart	8	−13.1	+24.3
San Antonio	82	− 4.5	+ 1.7
San Marcos	7	−32.8	− 1.9
All Others	80	− 7.8	− 2.5
DISTRICT 9	179	− 0.6	+ 9.0
Bay City	5	−12.0	+ 8.5
Beaumont	20	− 5.4	+ 1.0
Galveston	21	− 0.9	+ 8.9
Houston	64	+ 1.7	+10.3
Port Arthur	20	−14.0	+ 8.4
Victoria	9	+ 4.7	+ 3.0
All Others	40	+ 0.2	+ 8.7
DISTRICT 10	64	−15.8	− 2.2
Brownsville	11	−33.2	−11.6
Harlingen	10	−17.8	− 4.8
All Others	43	− 9.1	+ 1.4

NOTE: Prepared from reports from independent retail stores to the Bureau of Business Research, coöperating with the United States Department of Commerce.

NOVEMBER CARLOAD MOVEMENT OF POULTRY AND EGGS

Destination*	Cars of Poultry: Live Chickens Nov. 1938	Live Chickens Nov. 1937	Live Turkeys Nov. 1938	Live Turkeys Nov. 1937	Dressed Chickens Nov. 1938	Dressed Chickens Nov. 1937	Dressed Turkeys Nov. 1938	Dressed Turkeys Nov. 1937	Cars of Eggs† Nov. 1938	Cars of Eggs† Nov. 1937
Shipments from Texas Stations										
TOTAL	15	57	39	62	628	668	35	30		
Intrastate	1	—	—	—	—	8	12	16.5		
Interstate	14	57	39	62	628	660	23	13.5		
Receipts at Texas Stations										
TOTAL	—	—	—	—	1	—	27.5	46		
Intrastate	—	—	—	—	1	—	6.5	11		
Interstate	—	—	—	—	—	—	21.0	35		
Interstate Receipts Classified										
Kansas	—	—	—	—	—	—	9	14		
Missouri	—	—	—	—	—	—	10	21		
Colorado	—	—	—	—	—	—	1	—		
Iowa	—	—	—	—	—	—	1	—		

*The destination above is the first destination as shown by the original waybill. Changes in destination brought about by diversion orders are not shown.

†Powdered eggs and canned frozen eggs are converted to a shell egg equivalent.

NOTE: These data are furnished the United States Department of Agriculture by railroad officials through agents at all stations which originate and receive carload shipments of poultry and eggs. The data are compiled by the Bureau of Business Research.

COMMODITY PRICES

	Nov. 1938	Nov. 1937	Oct. 1938
WHOLESALE PRICES:			
U. S. Bureau of Labor Statistics (1926 = 100)	77.5	83.3	77.6
The Annalist (1926 = 100)	79.9	88.0	79.7
FARM PRICES:			
U. S. Department of Agriculture (1910–14 = 100)	94.0	107.0	95.0
U. S. Bureau of Labor Statistics (1926 = 100)	67.8	75.7	66.8
RETAIL PRICES:			
Food (U.S. Bureau of Labor Statistics, 1923–25 = 100)	77.8*	83.6	78.1
Department Stores (Fairchild's Publications, Jan. 1931 = 100)	—	94.5	89.0

*Preliminary.

TEXAS CHARTERS

	Nov. 1938	Nov. 1937	Oct. 1938
Domestic Corporations—			
Capitalization‖	$2,370	$1,515	$1,810*
Number	96	106	112*
Classification of new corporations:			
Banking-Finance	1	2	8
Manufacturing	12	14	16
Merchandising	21	28	21
Oil	26	25	26
Public Service	1	3	—
Real Estate-Building	8	10	12*
Transportation	5	1	—
All Others	22	23	29
Number capitalized at less than $5,000	41	41	45
Number capitalized at $100,000 or more	4	3	3
Foreign Corporations (Number)	23	24	29

*Revised.

‖In thousands.

NOTE: Compiled from records of the Secretary of State.

POSTAL RECEIPTS

	November 1938	November 1937	October 1938
Abilene	$ 16,827	$ 17,238	$ 19,139
Amarillo	27,753	30,256	32,273
Austin	64,136	59,471	61,162
Beaumont	23,488	26,092	25,795
Big Spring	5,668	5,589	6,770
Brownsville	5,664	5,353	5,321
Brownwood	5,996	5,968	6,470
Childress	3,522	2,608	3,078
Corpus Christi	22,144	22,001	23,835
Dallas	373,341	371,611	398,122
Del Rio	3,062	3,972	3,329
Denison	5,413	5,149	5,293
Denton	5,815	6,649	8,534
El Paso	46,966	44,871	44,376
Fort Worth	155,216	146,287	157,950
Galveston	30,184	26,906	29,611
Gladewater	2,665	2,635	3,097
Graham	2,025	2,127	2,606
Harlingen	5,824	5,674	5,930
Houston	227,376	221,946	241,255
Jacksonville	3,328	2,956	3,228
Longview	8,491	8,575	9,857
Lubbock	16,805	16,054	18,579
McAllen	3,808	3,651	5,008
Marshall	5,592	5,890	6,481
Palestine	4,566	4,798	5,024
Pampa	5,405	6,469	6,881
Paris	6,249	6,272	5,417
Plainview	4,241	3,912	4,377
Port Arthur	12,531	12,380	12,363
San Angelo	10,891	10,705	12,295
San Antonio	115,545	116,717	121,321
Sherman	6,874	6,512	7,529
Sweetwater	4,905	5,180	5,587
Tyler	17,152	17,256	17,206
Waco	33,545	31,211	33,263
Wichita Falls	26,621	21,007	23,500
TOTAL	$1,319,634	$1,291,948	$1,381,862

NOTE: Compiled from reports from Texas chambers of commerce to the Bureau of Business Research.

LUMBER

(In Board Feet)

	Nov. 1938	Nov. 1937	Oct. 1938
Southern Pine Mills:			
Average Weekly Production per unit	280,699	272,109	300,564
Average Weekly Shipments per unit	306,306	241,211	347,732
Average Unfilled Orders per Unit, End of Month	637,088	498,208	690,929

NOTE: From Southern Pine Association.

CONSUMPTION OF ELECTRIC POWER IN TEXAS

Power Consumed

(In Thousands of K.W.H.)

	Nov. 1938	Nov. 1937	Oct. 1938	Percentage Change: Nov. 1938 from Nov. 1937	Percentage Change: Nov. 1938 from Oct. 1938
Commercial	45,121	41,420	49,440	+ 8.9	− 8.7
Industrial	94,404	93,800	99,537	+ 0.6	− 5.2
Residential	33,844	30,398	34,555	+11.3	− 2.1
All Other	25,036	25,334	26,167	− 1.2	− 4.3
TOTAL	198,405	190,952	209,699	+ 3.9	− 5.4

NOTE: Prepared from reports form 16 electric power companies to the Bureau of Business Research.

NOVEMBER SHIPMENTS OF LIVE STOCK CONVERTED TO A RAIL-CAR BASIS§

	Cattle		Calves		Hogs		Sheep		Total	
	1938	1937	1938	1937	1938	1937	1938	1937	1938	1937
Total Interstate Plus Fort Worth¶	6,561	5,069	1,861	1,666	335	400	841	486	9,598	7,621
Total Intrastate Omitting Fort Worth	1,063	1,166	165	218	25	32	235	278	1,488	1,694
TOTAL SHIPMENTS	7,624	6,235	2,026	1,884	360	432	1,076	764	11,086	9,315

TEXAS CAR-LOT§ SHIPMENTS OF LIVE STOCK, JANUARY 1 TO DECEMBER 1

	Cattle		Calves		Hogs		Sheep		Total	
	1938	1937	1938	1937	1938	1937	1938	1937	1938	1937
Total Interstate Plus Fort Worth¶	52,660	55,936	12,516	11,816	6,133	6,791	11,442	10,704	82,751	85,247
Total Intrastate Omitting Fort Worth	8,197	9,011	1,440	1,617	524	510	1,710	2,517	11,871	13,655
TOTAL SHIPMENTS	60,857	64,947	13,956	13,433	6,657	7,301	13,152	13,221	94,622	98,902

§Rail-car Basis: Cattle, 30 head per car; calves, 60; hogs, 80; and sheep, 250.
¶Fort Worth shipments are combined with interstate forwardings in order that the bulk of market disappearance for the month may be shown.
NOTE: These data are furnished the United States Bureau of Agricultural Economics by railway officials through more than 1,500 station agents, representing every livestock shipping point in the State. The data are compiled by the Bureau of Business Research.

TEXAS COMMERCIAL FAILURES

	Nov. 1938	Nov. 1937	Oct 1938*
Number	20	16	29
Liabilities‖	$181	$231	$483
Assets‖	$106	$124	$362
Average Liabilities per Failure‖	$ 9	$ 14	$ 17

*Revised.
‖In thousands.
NOTE: From Dun and Bradstreet, Inc.

STOCK PRICES

	Nov. 1938	Nov. 1937	Oct. 1938
Standard Indexes of the Securities Markets:			
419 Stocks Combined	94.7	82.9	91.1
347 Industrials	113.6	96.1	109.6
32 Rails	30.0	31.4	28.1
40 Utilities	80.9	79.5	77.4

NOTE: From Standards Statistics Co., Inc.

NOVEMBER RETAIL SALES OF INDEPENDENT STORES IN TEXAS

	October, 1938				Year 1938		
	Number of Firms Reporting	Dollar Sales	Percentage Change in Dollar Sales from Nov. 1937	Percentage Change in Dollar Sales from Oct. 1938	Number of Firms Reporting	Dollar Sales	Percentage Change in Dollar Sales from Year 1937
TEXAS	1,277	$17,128,971	− 1.4	+ 4.5	888	$136,183,207	− 7.6
STORES GROUPED BY LINE OF GOODS CARRIED:							
APPAREL	145	2,447,158	− 6.8	− 6.4	111	21,805,956	− 3.0
Family Clothing Stores	32	313,112	−10.9	+ 1.5	23	1,943,845	− 7.6
Men's and Boys' Clothing	57	914,436	− 8.9	− 2.8	42	8,003,729	− 3.3
Shoe Stores	20	126,152	− 5.0	−22.9	17	1,348,043	− 2.3
Women's Specialty Shops	36	1,093,458	− 3.8	− 9.1	29	10,510,339	− 2.0
AUTOMOTIVE	152	3,718,162	+ 5.4	+40.0	99	27,046,223	−19.3
Filling Stations	59	238,334	− 4.6	− 0.3	28	1,296,479	+ 0.9
Motor Vehicle Dealers	93	3,479,828	+ 6.2	+44.0	71	25,749,744	−20.1
COUNTRY GENERAL AND FARMERS' SUPPLIES	110	704,200	− 3.7	− 1.1	84	5,172,397	− 9.7
DEPARTMENT STORES	70	5,800,161	− 2.9	+ 0.8	59	48,668,429	− 2.1
DRUG STORES	156	483,101	− 2.9	− 6.2	114	3,962,350	− 0.6
DRY GOODS AND GENERAL MERCHANDISE	14	63,964	− 9.0	− 2.5	3	74,392	− 1.5
FLORISTS	36	54,487	+ 7.9	+17.7	20	366,627	+ 1.4
FOOD	175	974,042	− 6.2	− 6.4	138	8,222,848	− 6.7
Grocery Stores	50	212,454	− 3.5	− 6.4	43	2,138,847	− 6.0
Grocery and Meat Stores	125	761,588	− 6.9	− 6.3	95	6,084,001	− 6.9
FURNITURE AND HOUSEHOLD	62	897,731	− 0.6	+ 4.5	43	7,198,913	− 9.7
Furniture Stores	50	787,297	+ 2.0	+ 7.7	36	6,259,627	− 8.1
Household Appliance Stores	7	67,916	−17.5	− 9.0	4	633,693	−24.6
Other Home Furnishings Stores	5	42,518	−13.5	−20.6	3	305,593	− 5.1
JEWELRY	50	275,105	− 2.0	+10.2	37	1,405,869	− 6.4
LUMBER, BUILDING, AND HARDWARE	270	1,582,095	+ 3.1	− 9.7	156	11,208,465	− 8.1
Farm Implement Dealers	12	50,331	−34.5	−15.4	7	485,268	−33.2
Hardware	81	410,835	− 8.1	− 8.1	47	2,663,515	−10.0
Lumber and Building Material Dealers	177	1,120,929	+11.0	−10.1	102	8,059,682	− 5.3
RESTAURANTS	22	81,838	− 2.4	+ 6.9	16	594,347	− 0.9
ALL OTHER STORES	15	46,927	−23.5	− 9.3	8	456,391	+ 7.9
TEXAS STORES GROUPED ACCORDING TO POPULATION OF CITY:							
All Stores in Cities of—							
OVER 100,000 POPULATION	294	9,481,640	+ 0.3	+ 5.3	201	77,948,500	− 6.2
50,000–100,000 POPULATION	119	1,633,836	− 0.3	+ 0.3	87	13,367,020	− 2.6
2,500–50,000 POPULATION	535	4,444,082	− 4.0	+ 6.0	376	33,877,897	−11.2
LESS THAN 2,500 POPULATION	329	1,569,413	− 5.2	+ 0.2	224	10,989,790	−11.4

NOTE: Prepared from reports from independent retail stores to the Bureau of Business Research, coöperating with the United States Department of Commerce.

PETROLEUM

Daily Average Production

(In Barrels)

	Nov. 1938	Nov. 1937	Oct. 1938
Coastal Texas*	220,850	199,750	202,750
East Central Texas	94,230	106,500	90,200
East Texas	400,290	466,800	369,750
North Texas	75,730	73,100	74,800
Panhandle	65,610	72,100	59,800
Southwest Texas	238,660	247,950	223,250
West Central Texas	30,830	34,300	30,500
West Texas	216,590	200,800	198,600
STATE	1,342,790	1,401,300	1,249,650
UNITED STATES	3,322,430	3,518,550	3,251,500
Imports	154,743	125,607	157,071

*Includes Conroe.
NOTE: From American Petroleum Institute.
See accompanying map showing the oil producing districts of Texas.

Gasoline sales as indicated by taxes collected by the State Comptroller were: October, 1938, 105,387,000 gallons; October, 1937, 103,968,000 gallons; September, 1938, 105,861,000 gallons.

BUILDING PERMITS

	November 1938	November 1937	October 1938
Abilene	$ 69,615	$ 29,245	$ 56,201
Amarillo	368,205	73,506	181,398
Austin	515,073	321,179	483,472
Beaumont	70,139	47,938	73,914*
Big Spring	18,382	46,400	19,405
Brownwood	4,077	1,200	625
Corpus Christi	491,461	195,078	182,050
Corsicana	17,282	7,740	13,050
Dallas	1,161,500	895,951	977,683
Del Rio	1,690	4,220	8,555
Denison	7,245	2,950	6,674
Denton	18,350	18,275	13,150
El Paso	88,156	83,850	204,615
Fort Worth	282,934	188,788	269,193
Galveston	266,247	221,079	99,320
Gladewater	2,100	4,625	2,755
Graham	19,295	6,550	6,650
Harlingen	14,991	36,325	17,710
Houston	1,679,965	1,080,250	3,055,045
Jacksonville	3,670	900	200
Kilgore	184,150*†	14,800†	‡
Laredo	7,825	8,375	18,500
Longview	11,675*	26,900*	7,500*
Lubbock	302,955	115,520	300,990
McAllen	9,765	6,070	46,867
Marshall	32,257	27,042	26,689*
New Braunfels	12,795	1,895	3,405
Palestine	20,158	9,868	13,137
Pampa	20,800	36,000	19,500
Paris	5,065	20,750	15,195
Plainview	4,250	1,295	4,201
Port Arthur	68,725	41,913	80,939
San Angelo	37,767	32,392	54,120
San Antonio	188,147	223,374	269,741
San Benito	1,240†	‡	520†
Sherman	22,368	10,334	34,160
Snyder	300	1,000	4,425
Sweetwater	3,900	10,620	5,945
Tyler	250,728	32,608	40,839*
Waco	99,357	68,177	81,943
Wichita Falls	84,611	32,014	127,206*
TOTAL	$6,283,825	$3,972,196	$6,826,967

*Does not include Public Works.
†Not included in total.
‡Not available.
NOTE: Compiled from reports from Texas Chambers of Commerce to the Bureau of Business Research.

NOVEMBER CREDIT RATIOS IN TEXAS RETAIL STORES

(Expressed in Per Cent)

	Number of Stores Reporting	Ratio of Credit Sales to Net Sales 1938	Ratio of Credit Sales to Net Sales 1937	Ratio of Collections to Outstandings 1938	Ratio of Collections to Outstandings 1937	Ratio of Credit Salaries to Credit Sales 1938	Ratio of Credit Salaries to Credit Sales 1937
All Stores	69	66.7	66.1	40.8	42.2	1.1	1.1
Stores Grouped by Cities:							
Amarillo	3	59.5	60.1	43.3	43.9	1.8	1.6
Austin	6	59.2	59.3	46.1	44.9	0.9	1.0
Dallas	10	73.2	73.2	42.9	44.3	1.0	1.0
Fort Worth	7	64.5	64.1	37.1	38.7	1.2	1.1
Houston	8	64.2	63.7	43.4	44.5	1.3	1.3
San Antonio	6	64.7	63.7	40.6	43.9	0.8	0.8
Waco	4	64.3	65.9	30.8	33.0	1.2	1.2
All Others	25	61.9	59.3	38.1	39.5	1.4	1.3
Stores Grouped According to Type of Store:							
Department Stores (Annual Volume Over $500,000)	19	66.2	65.5	42.3	43.1	1.1	1.0
Department Stores (Annual Volume Under $500,000)	11	60.2	58.0	36.4	37.9	1.7	1.6
Dry Goods-Apparel Stores	6	59.8	58.7	39.1	35.2	1.6	2.0
Women's Specialty Shops	14	70.7	70.8	37.9	41.7	0.9	0.8
Men's Clothing Stores	19	67.5	66.7	39.5	41.2	1.7	1.4
Stores Grouped According to Volume of Net Sales During 1937:							
Over $2,500,000	11	65.7	66.7	42.2	43.1	1.0	0.9
$2,500,000 down to $1,000,000	8	67.1	66.5	39.4	39.7	1.1	1.0
$1,000,000 down to $500,000	10	59.9	61.8	42.8	46.3	1.3	1.2
$500,000 down to $100,000	30	61.3	60.3	40.6	40.4	1.4	1.5
Less than $100,000	10	57.9	58.1	39.8	39.2	3.3	2.5

NOTE: The ratios shown for each year, in the order in which they appear from left to right, are obtained by the following computations: (1) Credit sales divided by net sales. (2) Collections during the month divided by the total accounts unpaid on the first of the month. (3) Salaries of the credit department divided by credit sales.
The data are reported to the Bureau of Business Research by Texas retail stores.

EMPLOYMENT AND PAY ROLLS IN TEXAS

ESTIMATED EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES, NOVEMBER, 1938, COMPARED WITH OCTOBER, 1938, and NOVEMBER, 1937

	Estimated Number of Workers Employed			Estimated Amount of Weekly Pay Roll		
	November 1938*	October 1938†	November 1937	November 1938*	October 1938†	November 1937
All Manufacturing Industries	113,479	111,750	125,960	$2,625,209	$2,487,945	$2,704,954
Food Products						
Baking	6,280	6,288	6,593	141,095	144,609	135,166
Beverages, Carbonated	1,656	1,848	1,500	27,227	32,221	23,475
Confectionery	1,123	1,057	1,036	13,104	12,705	12,322
Flour Milling	1,686	1,668	1,927	34,786	38,395	43,726
Ice Cream	441	455	511	9,586	10,277	10,655
Meat Packing	4,042	3,977	4,549	96,525	104,589	121,535
Textiles						
Cotton Textile Mills	3,948	4,058	3,863	51,047	56,269	51,032
Men's Work Clothing	3,274	3,095	3,333	28,062	24,718	27,022
Forest Products						
Furniture	1,687	1,679	1,792	26,791	29,418	25,344
Planing Mills	2,280	2,191	1,934	34,226	31,157	31,727
Saw Mills	10,565	10,163	10,383	121,011	133,625	131,341
Paper Products	634	596	600	10,500	10,795	10,142
Printing and Publishing						
Commercial Printing	1,797	1,812	1,795	49,601	50,495	50,120
Newspaper Publishing	4,080	4,020	4,071	117,353	115,733	115,475
Chemical and Allied Products						
Cottonseed Oil Products	2,086	1,844	3,096	26,882	24,023	43,097
Petroleum Refining	18,816	18,852	20,661	691,037	664,714	721,827
Stone and Clay Products						
Brick and Tile	700	744	690	9,710	10,919	8,171
Cement	1,159	1,272	1,317	24,836	24,737	27,544
Iron and Steel Products						
Foundries, Machine Shops	9,431	9,017	11,011	246,251	229,305	270,545
Steam Railroad Repair Shops	4,592	4,448	6,089	128,136	121,525	172,517
Structural and Ornamental Iron	1,356	1,303	1,250	27,627	26,752	28,908

CHANGES IN EMPLOYMENT AND PAY ROLLS IN NONMANUFACTURING INDUSTRIES, NOVEMBER, 1938

	Employment Percentage Change from		Pay Rolls Percentage Change from	
	October 1938	November 1937	October 1938	November 1937
Crude Petroleum Production	+ 1.2	− 4.3	+ 1.8	− 2.3
Quarrying	− 2.0	− 3.8	− 2.0	− 6.1
Public Utilities	− 0.4	− 5.5	+ 0.4	− 2.5
Retail Trade	+ 4.4	+ 0.5	+ 4.0	− 3.2
Wholesale Trade	+ 1.3	− 1.5	+ 1.3	− 0.4
Cotton Compresses	− 17.1	− 39.5	− 17.9	− 45.1
Dyeing and Cleaning	− 4.2	+ 4.6	− 3.8	+ 1.7
Hotels	− 1.1	− 2.8	− 2.1	− 3.4
Laundries	− 1.9	− 2.2	− 2.8	− 3.5

CHANGES IN EMPLOYMENT AND PAY ROLLS IN SELECTED CITIES AND FOR THE STATE, NOVEMBER, 1938

	Employment Percentage Change from		Pay Rolls Percentage Change from	
	October 1938	November 1937	October 1938	November 1937
Abilene	+ 3.0	+ 1.4	− 0.4	− 4.0
Amarillo	+ 4.3	− 26.8	+ 2.4	− 33.3
Austin	− 0.3	+ 2.8	+ 0.8	+ 4.2
Beaumont	+ 0.6	− 14.5	+ 7.1	− 7.0
Dallas	− 0.3	− 1.5	+ 2.1	− 4.6
El Paso	+ 9.2	− 5.8	+ 8.4	− 12.5
Fort Worth	+ 2.6	− 2.8	− 2.4	− 5.3
Galveston	− 4.2	− 18.3	− 4.8	− 18.2
Houston	+ 0.5	− 5.5	+ 0.9	− 1.0
Port Arthur	+ 0.2	− 12.1	+ 3.3	− 9.4
San Antonio	+ 1.2	+ 0.7	− 0.3	− 1.5
Sherman	+ 0.8	− 11.3	+ 5.0	− 7.8
Waco	+ 1.8	+ 5.1	+ 4.2	− 0.8
Wichita Falls	− 1.5	− 13.2	− 2.1	− 8.4
STATE	+ 0.9	− 6.1	+ 1.3	− 5.9

*Preliminary.

†Revised.

Prepared from reports from representative Texas establishments to the Bureau of Business Research, coöperating with the United States Bureau of Labor Statistics.

BANKING STATISTICS

(In Millions of Dollars)

	November, 1938		November, 1937		October, 1938	
	Dallas District	United States	Dallas District	United States	Dallas District	United States
DEBITS to individual accounts	749	29,061	785	32,128	976*	42,182*
Condition of reporting member banks on—	November 30, 1938		December 1, 1937		November 2, 1938	
ASSETS:						
Loans and investments—total	528	21,325	507	21,381	526	21,408
Loans—total	242	8,317	251	9,441	243	8,327
Commercial, industrial, and agricultural loans	159	3,866	160	4,637	158	3,899
Open market paper	1	338	3	475	1	347
Loans to brokers and dealers in securities	2	712	3	876	3	728
Other loans for purchasing or carrying securities	14	572	15	650	14	571
Real estate loans	21	1,169	21	1,167	21	1,164
Loans to banks	...	117	1	68	...	110
Other loans	45	1,543	48	1,568	46	1,508
U.S. Government obligations	193	8,106	179	7,963	186	8,132
Obligations fully guaranteed by U.S. Government	37	1,682	27	1,118	42	1,686
Other securities	56	3,220	50	2,859	55	3,263
Reserve with Federal Reserve Bank	106	7,337	117	5,374	111	7,116
Cash in vault	10	443	10	304	10	419
Balances with domestic banks	218	2,460	158	1,869	211	2,466
Other assets—net	27	1,306	29	1,313	27	1,243
LIABILITIES:						
Demand deposits—adjusted	419	16,013	401	14,612	416	15,766
Time deposits	133	5,124	127	5,234	133	5,155
U.S. Government deposits	31	534	16	416	31	540
Inter-bank deposits:						
Domestic banks	216	6,212	188	5,060	215	6,219
Foreign banks	...	508	...	418	1	475
Borrowings	...	1	...	6	...	2
Other liabilities	7	795	8	864	6	822
Capital account	83	3,684	81	3,631	83	3,673

*Five weeks.
NOTE: From Federal Reserve Board.

CONTENTS

PAGE

A Sketch of the Historical Development and Outlook of Manufacturing in Texas, Elmer H. Johnson 5
Business Review and Prospect, F. A. Buechel 3
Cotton, A. B. Cox 9
Financial, James C. Dolley 4

LIST OF CHARTS

Comparative Indexes of Pay Rolls in Texas and United States 1
Indexes of Business Activity in Texas 2

LIST OF TABLES

Banking Statistics 16
Building Permits 14
Carload Movement of Poultry and Eggs 12
Charters 12
Commercial Failures 13
Commodity Prices 12
Consumption of Electric Power 12
Cotton Balance Sheet 11
Credit Ratios of Texas Retail Stores 14
Employment and Pay Rolls in Texas 15
Lumber 12
Petroleum 14
Postal Receipts 12
Retail Sales of Independent Stores 11, 13
Shipments of Livestock 13
Stock Prices 13